INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3555

THE PENNSYLVANIA RAILROAD COMPANY

IN RE ACCIDENT

AT BROADWAY STATION,

CAMDEN, N. J., ON

JANUARY 15, 1954

SUMMARY

Date:	January 15, 1954	
Railroad:	Pennsylvania	
Location:	Camden, N. J.	
Kind of accident:	Rear-end collision	
Trains involved:	Passenger	: Passenger
Train numbers:	775	: 137
Engine numbers:		: Reading 217
Consists:	2 Diesel-powered cars	: 3 cars
Estimated speeds:	Standing	: 4 m. p. h.
Operation:	Interlocking	
Tracks:	Four; 1°29' curve; 0.74 percent ascending grade southward	
Weather:	Cloudy; dark	
Time:	6:18 p. m.	
Casualties:	28 injured	
Cause:	Failure to operate following train in accordance with a signal indication	

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3555

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE PENNSYLVANIA RAILROAD COMPANY

March 3, 1954

Accident at Broadway Station, Camden, N. J., on January 15, 1954, caused by failure to operate the following train in accordance with a signal indication.

REPORT OF THE COMMISSION[1]

JOHNSON, Chairman:

On January 15, 1954, there was a rear-end collision between two passenger trains on the Pennsylvania Railroad at Broadway Station, Camden, N. J., which resulted in the injury of 26 passengers and 2 train-service employees. This accident was investigated in conjunction with a representative of the Board of Public Utility Commissioners of the State of New Jersey.

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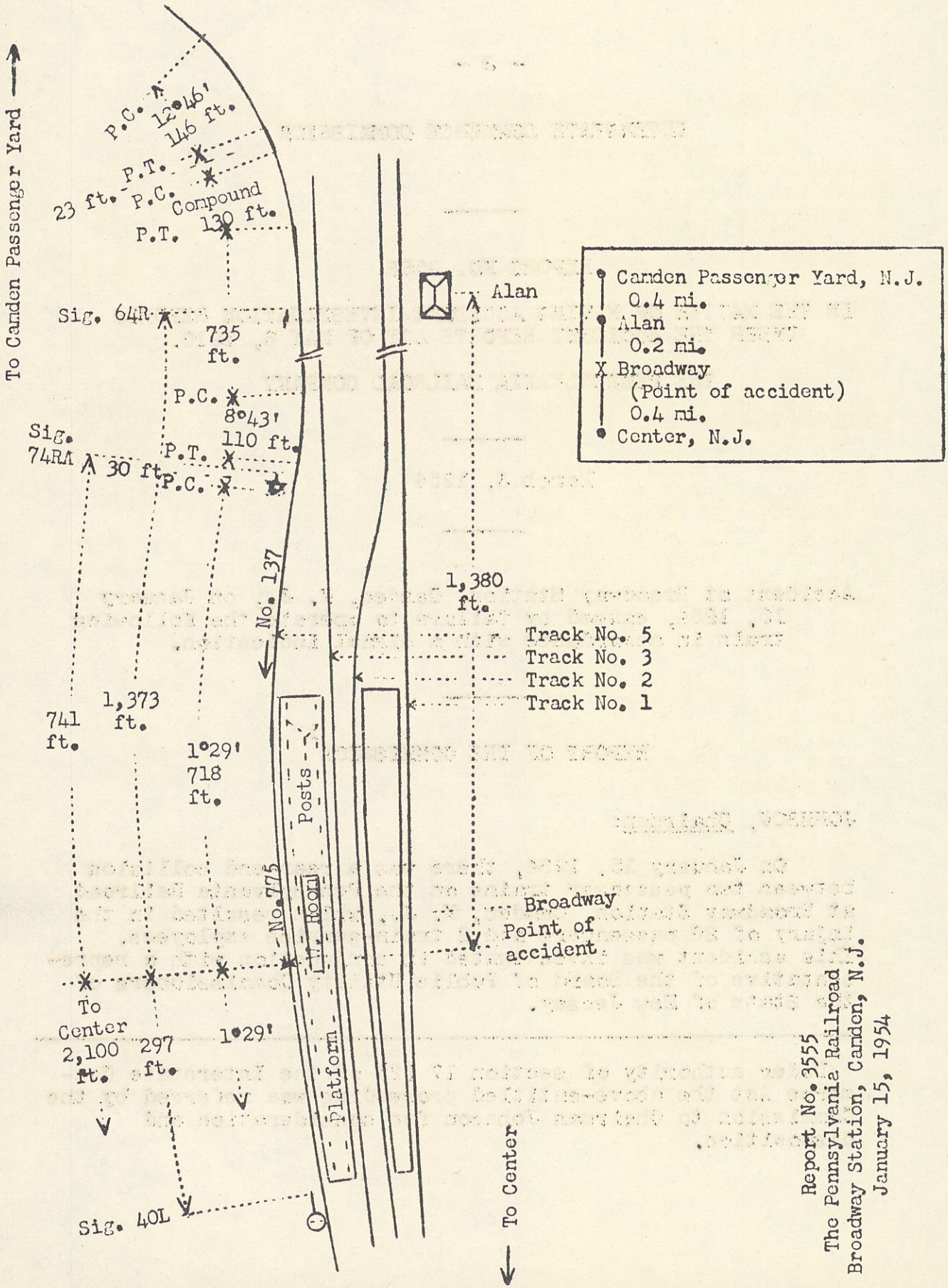
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Chairman Johnson for consideration and disposition.



Report No. 3555
The Pennsylvania Railroad
Broadway Station, Camden, N.J.
January 15, 1954

Location of Accident and Method of Operation

This accident occurred on that part of the Atlantic Division extending between Camden Passenger Yard and Center Interlocking Station, Camden, N. J., 1 mile. Trains of the Pennsylvania-Reading Seashore Lines are regularly operated over this portion of the Pennsylvania Railroad. In the vicinity of the point of accident this is a four-track line, over which trains are operated by signal indications. From east to west the main tracks are designated as No. 1, northward passenger; No. 2, northward passenger; No. 3, southward passenger; and No. 5, northward and southward passenger. At Broadway Station, approximately 3,200 feet south of Camden Passenger Yard, platforms for passenger traffic are located between tracks Nos. 1 and 2 and between tracks Nos. 3 and 5. A roof is provided on each platform. Reflector type electric lights are mounted on the under side of each roof. The platform adjacent to track No. 5 is approximately 720 feet in length. An enclosed waiting room for passengers is provided. The north end of this enclosure is about 265 feet south of the north end of the platform. The accident occurred on track No. 5 at a point approximately 400 feet south of the north end of the Broadway Station platform. From the north on track No. 5 there are, in succession, a 12°46' curve to the right 165 feet in length, a tangent 23 feet, a compound curve to the right, having a maximum curvature of 11°28', 130 feet, a tangent 735 feet, an 8°43' curve to the right 110 feet, a tangent 30 feet, and a 1°29' curve to the left 718 feet to the point of accident and several hundred feet southward. The grade is 0.74 percent ascending southward at the point of accident.

Semi-automatic signals 64R, 74Ra, and 40L governing south-bound movements on track No. 5, are located, respectively, 1,373 feet north, 741 feet north, and 297 feet south of the point of accident. Signals 64R and 74Ra are of the dwarf position-light type and each displays four aspects. They are continuously lighted. Aspects applicable to this investigation and the corresponding indications and names are as follows:

Signal	Aspect	Indication	Name
64R	Two white lights in diagonal position to the right	Proceed prepared to stop at next signal. Slow speed within interlocking limits.	Slow-approach.

74Ra	Two white lights in diagonal position to the left	Proceed at Restricted speed.	Restricting.

The controlling circuits are so arranged that when the route is lined for a south-bound movement on track No. 5 and the block of signal 74Ra is occupied, signal 64R indicates Slow-approach and signal 74Ra indicates Restricting.

Alan and Center interlocking stations are located, respectively, 1,380 feet north and 2,100 feet south of the point of accident. Interlocking limits extend throughout the distance between these stations. Signals governing south-bound movements on track No. 5 between Camden Passenger Yard and Broadway Station are controlled from Alan. Signal 40L is controlled from Center.

This carrier's operating rules read in part as follows:

DEFINITIONS

Speeds

* * *

Slow Speed--Not exceeding 15 miles per hour.

Restricted Speed--Not exceeding 15 miles per hour prepared to stop short of train, obstruction or switch not properly lined and to look out for broken rail.

34. Immediately upon seeing a fixed signal all members of engine and train crew must, when practicable, communicate to each other by its name the indication of each signal affecting the movement of their train or engine.

99. When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection * * *

605. Interlocking signals govern the use of the routes of an interlocking, and as to movements within interlocking limits that are protected by home signals and distant signals, their indications supersede the superiority of trains and engine and train crews are relieved from observing Rule 99 * * *

The maximum authorized speed for passenger trains in the vicinity of the point where the accident occurred is 30 miles per hour.

Description of Accident

No. 775, a south-bound first-class Pennsylvania-Reading Seashore Lines passenger train, consisted of two Diesel-powered passenger cars, coupled in multiple-unit control. The cars were of stainless steel construction. This train originated at Camden Passenger Yard and operated via track No. 5 to Broadway Station. It stopped at Broadway Station to load passengers. At 6:04 p. m., the schedule leaving time, it moved southward approximately 40 feet and stopped behind a preceding locomotive. The rear end of the train stopped at a point about 400 feet south of the north end of the station platform. About 14 minutes later the rear end was struck by No. 137.

No. 137, a south-bound first-class Pennsylvania-Reading Seashore Lines passenger train, consisted of Reading engine 217 and three coaches. All cars were of all-steel construction. This train was assembled at Camden Passenger Yard. It departed southward via track No. 5 about 6:14 p. m., passed signal 64R, which indicated Slow-approach, passed signal 74Ra, which indicated Restricting, and while moving at an estimated speed of 4 miles per hour it struck the rear end of No. 775.

No equipment of either train was derailed. No. 775 was moved southward a distance of several feet by the force of the impact. The rear car was slightly damaged.

The engineer and the fireman of No. 775 were injured.

The weather was cloudy and it was dark at the time of the accident, which occurred about 6:18 p. m.

Reading engine 217 is of the 4-6-2 type. It is provided with No. 6-Et type brake equipment.

Discussion

About 5:45 p. m. on the day of the accident the pneumatically operated switches of the interlocking at Center became temporarily inoperative because of low air pressure. At 6:04 p. m. No. 775 stopped behind a locomotive which was being held at signal 40L while repairs to the interlocking were being made. The marker lights of the rear car of No. 775 were lighted and displayed red to the rear. After the train stopped, the engineer and the fireman remained in the control compartment at the front of the first car. The conductor and the flagman alighted to the station platform. The flagman said that he was in the vicinity of the center of the rear car immediately before the accident occurred. He said that he became concerned when he observed No. 137 approaching, but the collision occurred before he could reach the rear of the train.

As No. 137 was approaching the point where the accident occurred the speed was about 4 miles per hour, as estimated by the engineer. The headlight was lighted dimly. The brakes of the train had been tested and had functioned properly when used en route. The engineer and the fireman were in their respective positions in the cab of the engine. The members of the train crew were in the cars of the train. Signal 64R indicated Slow-approach, and the enginemen called the indication. The engineer said that the indication of signal 74Ra changed from Stop to Restricting as the engine approached it and that he and the fireman called the indication. As the train entered the station the throttle was closed and the engineer was controlling the speed by use of the independent brake of the engine. The blower valve was open. Because of curvature of the track, the engineer's view of the track ahead was materially restricted. The engineer said that he was maintaining a lookout ahead and was glancing at intervals at a tree west of the track which he used as a mark at which to stop the engine in order to place the cars at the proper platform locations to load passengers. When the engine was approximately 30 feet north of the point at which the engineer intended to stop, he observed a marker light of the preceding train. He immediately applied the independent brake. The collision occurred immediately afterward and before the speed had been appreciably reduced. The fireman said that during the southward movement he was adjusting the stoker to obtain proper fuel distribution in the firebox. He said that his

attention was divided between maintaining a lookout ahead and adjusting the stoker jets and observing the stoker gauge. He opened the firedoor several times and glanced into the firebox to inspect the condition of the fire. Because of curvature of the track and structures on the station platform, the marker lights of a train standing at the point of accident are obscured at intervals as viewed from an approaching engine. The fireman said that as the train entered the station he was adjusting the stoker and observing the emission of smoke from the smokestack. He did not see the preceding train before the collision occurred.

This accident occurred within interlocking limits at a point where flag protection against following trains is not required. The aspect displayed by signal 74Ra required that No. 137 be operated in such manner that it could be stopped short of a preceding train.

Cause

This accident was caused by failure to operate the following train in accordance with a signal indication.

Dated at Washington, D. C., this third day of March, 1954.

By the Commission, Chairman Johnson.

(SEAL)

GEORGE W. LAIRD,

Secretary.